



US 20160094051A1

(19) **United States**(12) **Patent Application Publication**
SOAR(10) **Pub. No.: US 2016/0094051 A1**(43) **Pub. Date: Mar. 31, 2016**(54) **INDUCTIVELY COUPLED WIRELESS
POWER AND DATA FOR A GARMENT VIA A
DONGLE**(71) Applicant: **CYNETIC DESIGNS LTD., Kelowna
(CA)**(72) Inventor: **ROGER J. SOAR, Kelowna (CA)**(21) Appl. No.: **14/890,269**(22) PCT Filed: **May 12, 2014**(86) PCT No.: **PCT/CA2014/000423**

§ 371 (c)(1),

(2) Date: **Nov. 10, 2015****Publication Classification**(51) **Int. Cl.****H02J 5/00** (2006.01)**H04B 5/00** (2006.01)(52) **U.S. Cl.****CPC** **H02J 5/005** (2013.01); **H04B 5/0031**
(2013.01); **H04B 5/0037** (2013.01)(57) **ABSTRACT**

A system for transmission of at least power using inductive wireless coupling includes an environmentally sealed dongle and a mounting component which releasably mates with the dongle. The dongle is sized for use with one hand, and may be coupled by an umbilical to either a garment of the user or to a vehicle structure for example a seat, in which case the mounting component is coupled to the vehicle structure or to the garment respectively. The dongle and the mounting component include first and second inductive coils respectively and corresponding ferrite cores. The coils are positioned within the dongle and mounting component so that they are aligned for their inductive coupling when the dongle and mounting component are mated. The positioning and alignment of the coils provides a substantially closed magnetic path between the coils. The mounting component may be a receptacle.

Related U.S. Application Data

(60) Provisional application No. 61/822,140, filed on May 10, 2013.

